REMARKS

Formal Matters

Claims 1-8 are all the claims currently pending in the present application.

Respectfully, the Examiner is requested to acknowledge Applicant's claim to foreign priority and the receipt of the certified copy of the priority document submitted on December 19, 2001.

Applicant notes that the Examiner has returned signed copies of the PTO-Forms 1449 filed with Applicant's IDSs of April 9, 2003 and June 25, 2003. However, the Examiner has failed to initial the twelve Japanese references listed therein. The Examiner asserts that he has not initialed these references due to Applicant's failure to provide English language translations of these documents. However, such translations are not required and the Japanese Office Action dated March 12, 2003 with an English translation of the pertinent portions thereof, submitted with the June 25 IDS is sufficient under 37 C.F.R. § 1.98(a)(3) and MPEP §609. Applicant therefore requests that the Examiner return duly signed and initialed copies of the above-notes PTO-Forms 1449 with the next Office communication.

Specification and Figures

The specification stands objected to. The Examiner notes that the specification, at least at page 5, line 25, refers to Figure 2 illustrating a controller 12, which is not illustrated in Figure 2. Applicant has discovered that the figures submitted with the filing of the present application on November 26, 2001 were incorrectly copied such that portions of the figures were cut off.

Applicant therefore submits herewith replacement figures 1-3, 7, 8, and 11. No new matter is added as these figures were fully described in the originally-filed specification.

In view of the above, the Examiner is respectfully requested to withdraw the objection to the specification.

Claim Objections

Claims 1 and 3 stand objected to due to informalities. Specifically, the Examiner notes that these claims refer to a receiver including a plurality of correlators, while the disclosure of the specification refers to the path searcher (for a spread spectrum receiver) including a number of correlators (e.g. Abstract).

With this Amendment, Applicant amends Claims 1-8 for precision of language and to explicitly recite within the claims what was believed to have already been implicitly defined therein. Accordingly, these amendments do not foreclose application of reasonable equivalents. No new matter is added.

In view of at least the above, the Examiner is respectfully requested to withdrawn the objections to Claims 1 and 3.

Claim Rejections

Claim 1 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Applicant's admitted prior art (AAPA), in view of Leibowitz, U.S. Patent No. 4,660,164 ("Leibowitz") and Kohli et al., U.S. Patent No. 5,901,171 ("Kohli"). Claims 2, 3, 5, and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over AAPA, in view of Leibowitz,

Kohli, and Flockencier, U.S. Patent No. 5,511,015 ("Flockencier"). Applicant respectfully traverses these rejections.

Applicant submits that none of the cited references teaches or suggests performing a correlation operation between a received spread spectrum signal and a replica at a rate higher than a chip rate of the spread spectrum signal, as required by each of Claims 1, 3, 5, and 7. The Examiner acknowledges that AAPA and Leibowitz fail to teach or suggest this limitation, and therefore relies on Kohli. (Office Action, p. 4).

In the Kohli system, spread spectrum signals from a number of GPS satellites are received by a GPS receiver. The GPS receiver detects a 1,023-Mpbs C/A (course acquisition) code from each of the received spread spectrum signals and samples the detected C/A code at $2f_0$, which is twice the chip rate f_0. In the GPS receiver, the sampled data is multiplexed with other sampled data of the other spread spectrum signals into 12 channels. With the sampling and multiplexing operations, the amount of C/A code information to be correlated is increased 24 times. Figure 11 shows that 1 millisecond period of the sampled data is divided into 186 time segments. Since C/A code is 1,023 Mbps, each time segments contains 5.5 chips, or 11 half chips (i.e. 11 bits). In the above-described multiplexing process, each time segment is further divided into 12 sub-segments (SVs). Correlation is then performed 22 times on the multiplexed sampled data (SV #1 through SV # 12) at $48f_0$, twice for each sub-segment SV. Thus, at the rate of $24f_0$ correlation is performed on the multiplexed twelve C/A codes. Since the amount of C/A code information is increased 24 times by the sampling and multiplexing processes, correlation can be

said to occur once for each C/A code at the original chip rate of f_0. (See Kohli, col. 24, lns. 30-45 (summary) and col. 24, ln. 55 to col. 25, ln. 48).

Therefore, in Kohli, the chip-rate correlation takes place only "once" between each spread spectrum signals and a spread code. As recited in Claims 1, 3, 5, and 7 of the present invention, higher than chip rate correlation is repeatedly performed on the spread spectrum signal with a replica of the scrambled synchronization code by successively shifting the replica with respect to the spread spectrum signal. Therefore, it is clear that Kohli fails to teach or suggest performing the correlation operation at a higher rate than the chip rate of the spread spectrum signal.

Additionally, regarding Flockencier, Applicant submits that Flockencier fails to remedy the above-discussed deficiencies of AAPA, Leibowitz, and Kohli.

Therefore, in view of at least the above, Applicant submits that Claims 1-3, 5, and 7 are patentable over any reasonable combination of AAPA, Leibowitz, Kohli, and Flockencier, and respectfully request that the rejection of these claims be reconsidered and withdrawn.

Allowable Subject Matter

The Examiner indicates that Claims 4, 6, and 8 contain allowable subject matter and would be allowed if rewritten into independent form, including the limitations of the claims from which they depend. Applicant respectfully requests that the rewriting of these claims be held in abeyance until Applicant's above arguments with respect to Claims 3, 5, and 8 have been considered.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: June 3, 2005

AMENDMENTS TO THE DRAWINGS

Please replace Figures 1-3, 7, 8, and 11 with the attached, replacement figures.

Attachment: Six (6) Replacement Sheets